Vincent, M.A., R.L. Gardner, and B.P. Riley. 2011. Additions to and interesting records for the Ohio vascular flora (with one new record for Indiana). Phytoneuron 2011-60: 1–23. Published 29 Nov 2011. ISSN 2153 733X

ADDITIONS TO AND INTERESTING RECORDS FOR THE OHIO VASCULAR FLORA (WITH ONE NEW RECORD FOR INDIANA)

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ABSTRACT

Eighty taxa of vascular plants are reported as either new to the Ohio flora, or represent significant new records for previously rarely reported taxa. New species reported for Ohio include these: *Aesculus pavia, Allium tuberosum, Bulboschoenus maritimus, Bothriochloa bladhii, Bothriochloa ischaemum, Bothriochloa laguroides, Carex austrina, Carex cherokeensis, Carex complanata, Carex divulsa, Carex gigantea, Carex reznicekii, Celtis laevigata, Chloris virgata, Cotoneaster apiculatus, Croton willdenowii, Cyperus difformis, Egeria densa, Eleutherococcus pentaphyllus, Elsholtzia ciliata, Ginkgo biloba, Juniperus sabina, Kalopanax septemlobus, Kyllinga gracillima, Malus baccata, Malus prunifolia, Medicago minima, Pennisetum alopecuroides, Phyllanthus tenellus, Pinus taeda, Prunus armeniaca, Quercus phellos, Rubus parviflorus, Schoenoplectus mucronatus, Symplocos paniculata, Tsuga caroliniana, Ulmus parvifolia, Viburnum carlesii, Viburnum setigerum, Viburnum sieboldii,* and *Zoysia japonica.* New waifs included: *Angelonia angustifolia, Bidens pilosa, Catharanthus roseus, Chamaesyce hirta, Cyperus involucratus, Emilia sonchifolia, Gamochaeta pensylvanica, Impatiens walleriana, Lagerstroemia indica, Metasequoia glyptostroboides, Senna obtusifolia, Smilax bona-nox,* and *Youngia japonica.* New hybrids are documented for Ohio in *Carex, Malus, Quercus, Sorghum, Ulmus,* and *Viburnum.* In addition, *Kalopanax septemlobus* is documented as new for Indiana. Three species, *Juniperus sabina, Metasequoia glyptostroboides,* and *Viburnum carlesii,* are new to the flora of North America.

Floristic investigations in Ohio continue to result in new discoveries. The flora of the state consists of nearly 3,000 species (Cooperrider et al. 2001), of which approximately 35% are introductions to Ohio. The percentage of introduced species to aliens is likely to continue to increase as anthropogenic influences on the state increase, and these may have unintended ecological and economic impacts on the state (see for example, an analysis by Pimentel et al. 2001). Continued documentation and study of the flora of Ohio is important as a way to track the impacts of the introduction of new species and losses of others that result from habitat destruction, climate change, and other human impacts. Discovery of new introductions to a flora must be constantly reported so

that potential invasions of new species can be detected early, and so that the spread of potentially weedy taxa can be stopped earlier in the invasion process.

Discovery of these taxa as part of the flora of Ohio resulted from a combination of examination of specimens in herbaria and field work. Some of the taxa listed are likely overlooked native taxa, while others are here as the result of introductions, either intentional or accidental.

CATALOGUE OF NEW OR OTHERWISE INTERESTING PLANT TAXA IN THE STATE OF OHIO, WITH VOUCHER SPECIMENS:

ACER SACCHARUM Marsh. var. *SCHNECKII* Rehder (Aceraceae) – Schneck's sugar maple

Clermont Co.: extreme SE Franklin Twp., one medium-sized, native individual (local in area on upland sites) located along wood-lined fencerow above creek bottom along W edge of Bartlow Rd. (CR 7), 1.38 mi. N of US Rt. 52, Utopia, 18 Jul 2009, *B.P. Riley 1094-1095* (OS); *ibid, B.P. Riley 1096* (MU). **Gallia Co.**: Perry Twp., N central ½ sect. 23 one mature, native tree (ca. 18" DBH) growing on mesic site on W side of Raccoon Creek & on E side of Dan Jones Rd. (CR 28), .15 mi. S of SR 141 on S side of bridge over Raccoon Creek, 1 Aug 2009, *B.P. Riley 1097* (OS); *ibid, B.P. Riley 1098* (MU). **Ottawa Co.**: State Conservation Park, South Bass Island, Lake Erie, 17 Jun 1950, *F.O. Grover A50-2* (OS); *ibid, F. Grover A50-3* (MU); near southwest tip of island about 50 feet due northeast of base of alligator bar, Gibraltar Island, 27 Jul 1967, *H.J. Harlan 4* (OS); Put-in-Bay Twp., Green Island, abundant throughout wooded portion of island, dominant with hackberry, 12 Jul 1969, *T. Duncan 376* (OS); Rattlesnake Island, large tree in the woods near the neck of island, 28 Jul 1970, *M.L. Roberts 627 & K. Foos* (OS).

Schneck's sugar maple is known from several states in the east-central USA, including Indiana and Kentucky (USDA NRCS 2011). It can be distinguished from typical sugar maple by its densely villous abaxial leaf veins and petioles (Fernald 1950). It appears to be a native part of the Ohio flora.

AESCULUS HIPPOCASTANUM L. (Sapindaceae) – Horsechestnut

Wood Co.: Freedom Twp., Wm. Henry Harrison Park, Pembroke, sapling in floodplain woods along Portage River, 4 Jun 2008, *B.P. Riley 828* (MU).

This specimen represents a new county record for this commonly cultivated, though rarely escaping, European species (Cooperrider 1995; Cooperrider et al. 2001).

AESCULUS PAVIA L. (Sapindaceae) – red buckeye

Hardin Co.: Roundhead Twp., NW ¼ NE ¼ sect. 21, one plant (ca. 7' tall) in mesic woods surrounding old home site at 14758 SR 235, N of Roundhead, now owned by Ohio Northern University, 2 May 2005, *B.P. Riley 96, M. Moser & M. Campbell* (OS).

Red buckeye, which is native to the southeastern USA (Gleason & Cronquist 1991), is occasionally cultivated in Ohio as an ornamental. It was not reported for Ohio by Cooperrider (1995) or Cooperrider et al. (2001).

ALLIUM TUBEROSUM Rottler ex Spreng. (Alliaceae) – Chinese chives

Butler Co:, Oxford, weedy at edge of woods N of Formal Gardens, Miami University campus, 7 Sep 2006, *M.A. Vincent 13236* (CANB, MU); Oxford, weedy in flower beds, 7 Sep 2000, *M.A. Vincent 9177* (MU, OSH).

McNeal and Jacobsen (2002) reported the occasionally cultivated Chinese chives from three states and alluded to its establishment in New England. It is used as a pot-herb or spice in Asian cooking.

AMPELOPSIS ARBOREA (L.) Koehne (Vitaceae) – peppervine

Butler Co.: Miami University campus, Oxford, weedy in "palm garden", Upham Hall courtyard, 19 Sep 2003, *M.A. Vincent 13231* (MU). **Clermont Co.**: extreme SW Franklin Twp., local population vigorously growing on and over woody vegetation near NE edge of young, floodplain woods located at SW corner of US Rt. 52 & Hamilton Rd., 0.10 mi. W of SR 222, Chilo, 11 Sep 2010, *B.P. Riley 1412-1413* (OS); *ibid*, *B.P. Riley 1414* (MU).

Though peppervine is listed for Ohio by the USDA Plants database (USDA NRCS 2011), no documentation of this could be located, and so the species is listed here as new to the State. It has been reported for Kentucky (Medley 1993) and is also perhaps found in Indiana (USDA NRCS 2011), though this has not been verified (K. Yatskievych, *pers. com.*).

ANGELONIA ANGUSTIFOLIA Benth. (Scrophulariaceae) – Narrowleaf angelonia

Butler Co.: Oxford Twp., side of road on US Rt. 27, in ditch, 6 Oct 2010, *K. Huntoon 36* (MU).

This record must be considered a waif, since the population did not persist. The species, which is native to Mexico and Central America and is widely cultivated as a bedding plant, is reported from two counties in Florida (Wunderlin & Hansen 2008), though no other reports of it as an escape can be found.

BIDENS PILOSA L. (Asteraceae) – Hairy beggarticks

Butler Co.: Oxford, weed in garden, 23 Sep 1997, *M.A. Vincent 8008* (BAYLU, F, MO, MU, OS, WS).

This species, which is native to Mexico and Central America, is found throughout the Caribbean and southeastern USA and occasionally as far north as Pennsylvania, Ontario, and Quebec (Ballard 1986; Strother & Weedon 2006). If one follows Ballard (1986) rather than accepting the broader species circumscription of Strother and Weedon (2006), this specimen will key out to *B. alba* (Linn.) DC. var. *radiata* (C.H. Schultz-Bip.) Ballard. This record must be considered adventive (a waif), since the population did not persist.

BOLBOSCHOENUS MARITIMUS (L.) Palla (Cyperaceae) – salt-marsh bulrush

Adams Co.: Franklin Twp., local, 3 x 5 m. colony in median of St. Rt. 32 at the jct. with St. Rt. 73, 5 Jun 2010, *R.L. Gardner 6814 & C. Harner* (MICH, OS).

Bolboschoenus maritimus is a halophyte from Asia and Europe and now occurs throughout most of North America (Smith 2002a). Another small colony was found in the median of State Route 32 in Adams County within a few miles from the collection site. Mowers will aid in spreading this species along Ohio's highways. Ohio collections are apparently all subspecies *paludosis* (A. Nels.) T. Koyama.

BOTHRIOCHLOA BLADHII (Retz.) S.T. Blake (Poaceae) – Caucasian bluestem

Greene Co.: Beaver Creek Twp., local, ca. 25 sq. ft. area, in created prairie; Mount St. John N. of Shakertown Rd. & W. of I-675, 2 Oct 2008, *R.L. Gardner 6074, D. Geiger & M. Banker* (MICH, OS).

Bothriochloa bladhii is a western species with rare occurrences eastward (Allred 2003; Gleason & Cronquist 1991). It was likely introduced to Ohio from a prairie seed mix utilized in the creation of a prairie in the Dayton area.

BOTHRIOCHLOA ISCHAEMUM (L.) Keng (Poaceae) – yellow bluestem

Pickaway Co.: Harrison Twp., sect. 23, local in median of U.S. Rt. 23, 16 Oct 2011, *R.L. Gardner 7179* (OS). **Portage Co.**: Charlestown Twp., roadside, Camp Ravenna Joint Military Training Center, 12 Jul 2010, *R.L. Gardner 6876* (OS); Charlestown Twp., occasional roadside lawns for about 0.5 mi. along Newton Falls Rd. W of Greenleaf Rd., Ravenna Training and Logistics Site, 1 Sep 1998, *R.L. Gardner 2229* (OS). **Ross Co.**: Springfield Twp., NW ¼ sect. 6, local in mowed lawn at St. Rt. 159 exit off of southbound U.S. Route 23, 3 Oct 2008, *R.L. Gardner 6077* (OS).

The 1998 specimen was originally identified as a variety of *Miscanthus sinensis*. *Bothriochloa ischaemum* was likely introduced to Camp Ravenna by train coming from western USA, where it is more commonly found; it is native to Eurasia (Allred 2003).

BOTHRIOCHLOA LAGURIODES (DC.) Herter (Poaceae) – bearded white grass

Franklin Co.: City of Columbus, frequent in median and adjacent road bank on southbound side of IR-71, 14 Sept 2011, *R.L. Gardner 7158* (OS). **Marion Co.**: Grand Prairie Twp., NW ¼ sect. 35, locally common in median of U.S. Rt. 23, 27 Aug 2011, *R.L. Gardner 7145* (MU, OS).

Bothriochloa laguriodes is spreading eastward along major highways and likely been in Ohio for at least 5 years. This species also occurs in the median of IR-675 in City of Beavercreek, Greene County.

BUDDLEJA DAVIDII Franch. (Buddlejaceae) – Butterfly bush

Adams Co.: Sprigg Twp., SE-facing slope on US Rt. 52, SSW of Yates Rd., 2 Aug 2008, *B.P. Riley 855* (MU). **Butler Co.**: Oxford, Miami University campus, weedy along edge of driveway, 1 Dec 2004, *M.A. Vincent 12325* (MU); *ibid*, 12 Aug 2011, *M.A. Vincent 15654* (MU, NY, OS); Oxford, field, 1 Oct 2010, *R. Butler 16* (MU), Oxford, Miami University Natural Areas, 27 Sep 2010, *K. Huntoon 9* (MU); *ibid.*, *K. Huntoon 10* (MU). **Darke Co.**: Greenville, weedy in cracks along Wayne Ave., 27 Nov 2004, *M.A. Vincent 12324* (MU). **Washington Co.**: Marietta Twp., on boulders along St. Rt. 7, frequent local escape, 19 Aug 2008, *R.L. Gardner 6000* (OS).

These reports represent new county records for this increasingly common invasive species.

CAREX AUSTRINA Mackenzie (Cyperaceae) – southern sedge

Adams Co.: Green Twp., rare, 3 plants in sandy field with *Opuntia humifusa*, W. of Sandy Springs Cemetery, N. of US Rt. 52, 27 Jul 2009, *R.L. Gardner 6463 & L. Henry* (MICH, MU, OS).

Carex austrina occurs in south-central USA and into northern Mexico. In 2009, population of 3 vigorous plants was discovered in a disturbed black oak sand barren in the Ohio River Valley. The population occurs in abandoned sandy field, associates include *Galactia volubilis, Opuntia humifusa, Cyperus lupulinus, Asclepias amplexicaulis, Eragrostis spectabilis*, and *Schizachyrium scoparium*, with rarities *Krigia virginica, Draba brachycarpa, Carex reznicekii,* and *Carex mesochorea*. The closest populations to Ohio are in northern Tennessee and perhaps southern Kentucky (Ball 2002a).

CAREX CHEROKEENSIS Schweinitz (Cyperaceae) – Cherokee sedge

Erie Co.: Kelleys Island Twp., rare, 2 colonies in red cedar woodland, Kelleys Island State Park, 5 Jun 2008, *R.L. Gardner 5778 & T. Arbour* (MICH, OS).

This is the first record in Ohio for this short-creeping, rhizomatous perennial. Its stout rhizome with its conspicuous remnant leaf bases is diagnostic. This is by far the northernmost population, with the closest population in north central Kentucky (McKinnney et al. 2000; Waterway 2002). This population includes 2 small clones in a former pastured alvar now part of Kelleys Island State Park. *Carex cherokeensis* was likely accidently introduced to the island. The population is stressed from over-shading by *Juniperus virginiana* and the non-native *Elaeagnus umbellata*.

CAREX COMPLANATA Torrey and Hooker (Cyperaceae) – flattened sedge

Athens Co.: Dover Twp., rare, 5 clumps; open oak woods on upper slope of moderately steep SSE.-facing hillside, 0.67 mi. NW. of BM 665, 29 May 2008, *R.L. Gardner 5767* (MICH, MU, OS). **Gallia Co.**: Greenfield Twp., sect. 14, infrequent, 11 to 50 plants; dry, upland woods, Wayne National Forest, 18 May 2010, *R.L. Gardner 6767* (OS).

Carex complanata occurs mostly in the southeastern USA, reaching its northern limit in Iowa (Ball 2002b). It is very similar to *Carex hirsutella* and *C. caroliniana*. These are the first confirmed occurrences of *Carex complanata* for Ohio. It is likely more frequent in Ohio than currently known.

CAREX DIVULSA Stokes (Cyperaceae) – grassland sedge

Erie Co.: Kelley's Island Twp., local in red cedar woodland, 0.3 mi. NW. of jct. of Morgan Rd. & Woodford Rd., Kelleys Island State Park, 5 Jun 2008, *R.L. Gardner 5791 & T. Arbour* (MICH, MU, OS).

Carex divulsa is a species native to Eurasia and is naturalized in Ontario (Canada), D.C., Pennsylvania (Ball 2002a), and now Ohio. It was discovered on Ohio's largest island, Kelley's Island, in a *Juniperus virginiana* dominated woodland. This sedge is sold as an ornamental ground cover, which may increase its frequency in Ohio.

CAREX GIGANTEA Rudge (Cyperaceae) – large sedge

Gallia Co.: Greenfield Twp., NE. ¼ sect. 14, infrequent, ca. 75 plants in shallow depressions S. of Symmes Creek, 8 Jul 2009, *R.L. Gardner 6370* (MICH, MU, OS).

Carex gigantea is a loosely cespitose or long-rhizomatous perennial with erect culms. It is infrequent throughout majority of its range from the Atlantic Coastal Plain up the Mississippi and Ohio River valleys (Reznicek 2002). A population was discovered at the Ironton Ranger District of the Wayne National Forest. The site is an *Acer saccharinum-Betula nigra-Quercus palustris-Carya laciniosa-Liquidambar styraciflua* bottomland swamp forest with numerous shallow sloughs. Hundreds of culms were found growing in association with *Carex louisianica, C. lupuliformis, C. intumescens, C. grayi, C. lurida, C. tribuloides, C. typhina, C. squarrosa, C. lupulina, Isoëtes engelmannii, Proserpinaca palustris, Saururus cernuus, Campsis radicans, Ranunculus flabellaris, Panicum rigidulum,* and *Sium suave.* *Carex gigantea* is currently listed as endangered in Ohio (ODNR 2010).

CAREX GRAYI Carey × *CAREX INTUMESCENS* Rudge (Cyperaceae)

Gallia Co.: Greenfield Twp., rare, floodplain wet woods with *Carex grayi, C. intumescens, C. tribuloides, C. lupulina, & C. squarrosa*, Symmes Creek, 9 Aug 2009, *R.L. Gardner 6491, J. McCormac & R. Showman* (CLM, MICH, MU, OS).

This is the first record of this hybrid in Ohio. Parent species were common in a *Acer saccharinum-Betula nigra-Quercus palustris-Carya laciniosa-Liquidambar styraciflua* bottomland swamp forest. On return trips to the site, the hybrid was discovered to be scattered throughout floodplain swamp forest with parent species.

CAREX REZNICEKII Wierer (Cyperaceae) – Reznicek's sedge

Adams Co.: Green Twp., local, 11-50 plants, sandy soils; E. side of main drive into cemetery, center of Sandy Springs Cemetery, 20 Apr 2008, *R.L. Gardner 5681* (MICH, OS); Green Twp., scattered; sandy soil, cemetery, jct. of US Rt. 52 & Twp., Rt. 31A at Sandy Springs, 12 Apr 2001, *Cusick 35,761* (OS). **Jackson Co.**: Jackson Twp., sect. 35, common in dry soil of open oak woods on steep slope, N. side of Twp. Rt. 223 CA. 1 mi., N. of US Rt. 35, 17 Apr 1990, *McCormac 2068* (MU, OS). **Meigs Co.**: Olive Twp., very local on well-drained, exposed, S.-facing slope on N. side of Twp. Rt. 265 on W. side of main headwaters of Forked Run, Shade River Forest, 23 Apr 1990, *Ortt 2862-B* (KE). **Scioto Co.**: Madison Twp., sect. 24, local population on dry, sandy soil within narrow power line clearing running through mature oak woods, S-SE side of Winter Rd. (T-216), 0.925 mi. E-NE of Mt. Carmel Rd. (T-212), 7 May 2011, *B.P. Riley 1886* (OS); *ibid, 1887* (MICH).

Carex reznicekii is a recently described species from the southeastern USA (Weirer 2006). Searches of Ohio herbariums revealed a few specimens from southern Ohio. This species is listed as endangered in Ohio (ODNR 2010).

CATHARANTHUS ROSEUS (L.) G. Don. (Apocynaceae) – Madagascar periwinkle

Preble Co.: Israel Twp., sect. 29, weedy in gravel parking lot at Camp America, Camden-College Corner Rd., 29 Oct 2000, *M.A. Vincent 9189* (MU).

Madagascar periwinkle is commonly cultivated in Ohio as an annual bedding plant (Cooperrider 1995) but has not been previously reported in the state as an escape. In this case, 12 plants were found growing in the gravel parking lot, which was near a building where the species had been cultivated a year or two before. The species, native to the Island of Madagascar, has become a pantropical weed. Many cultivars exist, and are commonly used as bedding annuals. In the USA,

Catharanthus roseus is known to have naturalized in Florida and is encountered as an escape as far north as North Carolina and Tennessee (Weakley 2011).

CELTIS LAEVIGATA Willd. var. *LAEVIGATA* (Ulmaceae) – sugarberry

Clermont Co.: extreme SE Franklin Twp., one young, native individual (up to 2.38" DBH x ca. 23' tall) located along wood-lined fencerow on upland site above creek bottom along W edge of Bartlow Rd. (CR 7), 1.38 mi. N of US Rt. 52, Utopia, 21 Sep 2007, *B.P. Riley 637-638* (OS), *639-640* (MU); extreme SW Pierce Twp., two mature, native trees (largest 29.60" DBH) growing in mature, mesic woods on SE-facing slope above Ohio River, located at 530 Old US Highway 52, .90 mi. W-NW of SR 743, New Richmond, 24 May 2009, *B.P. Riley 1171-1172* (OS), *1173-1174 & M. Wessel* (MU).

CELTIS LAEVIGATA Willd. var. *SMALLII* Sarg. (Ulmaceae) – sugarberry

Clermont Co.: extreme SW Franklin Twp., one mature, native tree (16.0" DBH × ca. 50' tall) and several clonal saplings along S edge of US Rt. 52, .75 mi. E of Bear Creek Rd. (T-15), Chilo, 14 Jul 2007, *B.P. Riley 630-631* (OS); *ibid, B.P. Riley 632* (MU); *ibid,* 28 Jul 2007, *B.P. Riley 633* (OS); *ibid,* 18 Aug 2007, *B.P. Riley 634* (OS); *ibid,* 7 Sep 2007, *B.P. Riley 635 & B. L. Weber* (MU); *ibid,* 19 Jul 2008, *B.P. Riley 878-880* (OS), *881-882* (MU), *883* (BHO), *886-887* (OS); *ibid,* 6 Sep 2008, *B.P. Riley 888* (MU).

CHLORIS VIRGATA SW. (Poaceae) – Feather finger grass

Hamilton Co.: Whitewater Twp., NW ¼ sect. 21, local, about 100 plants, roadside berm, U.S. Rt. 50, 5 Sep 2011, *R.L. Gardner 7, B. Riley & D. Boone* (MU, OS). **Washington Co.**: Warren Twp., Village of Constitution, along roadside berm, E. bound St. Rt. 7, Blues Knob Rd., ca. 500 ft. S. of BM 607, 18 Sep 2009, *R.L. Gardner 6057* (MU, OS).

Chloris virgata is a spreading to erect annual, native to tropical America and is now widespread in southwestern USA and scattered eastward (Barkworth 2003a; Gleason & Cronquist 1991). No plants were observed at the Washington County site in 2010. This species will likely be found more frequently along roadsides in southern Ohio.

COTONEASTER APICULATUS Rehder & E.H. Wilson (Rosaceae) – Cranberry cotoneaster

Pickaway Co.: Washington Twp., NE ¼ SE ¼ sect. 10, one non-fruiting escaped individual (ca. 2' tall) located on E edge of Hargus Lake in mesic woods within AW Marion State Park, 22 Sep 2006, *B.P. Riley 431* (OS).

Cranberry cotoneaster has been reported from Kentucky (Medley 1993) and Pennsylvania (Rhoads & Block 2000) as cultivated and rarely escaping.

CHAMAESYCE HIRTA (L.) Millsp. (Euphorbiaceae) – Pillpod sandmat

Butler Co.: Oxford, Miami University campus, weedy in "palm garden", Upham Hall courtyard, 19 Sep 2003, *M.A. Vincent 11423* (MU); *ibid*, 15 Oct 2004, *M.A. Vincent* 12322 (MO, MU, OS).

This species (also known as *Euphorbia hirta* L.) was introduced as a weed with cultivated plants brought in from the Southeast and persisted at this site from 2002 through 2006. It is rarely found in northern regions of the USA, though it is common in the southern tier of states.

CROTON WILLDENOWII G.L. Webster – Willdenow's croton

Jackson Co.: Bloomfield Twp., local, 11-25 plants in abandoned quarry, 24 Sep 2011, *R.L. Gardner 7169 et al.* (OS, MU).

The site is a highly disturbed area; however, many native species exist in the quarry and this is likely a native population.

CYPERUS DIFFORMIS L. (Cyperaceae) – variable flat-sedge

Delaware Co.: City of Delaware, locally common and likely introduced in mitigation bank wetland, 13 Aug 2011, *R.L. Gardner 7124* (CLM, MICH, MU, OS, OWU).

This is the first record for Ohio of this common weed of rice fields around the world. It was discovered in North America in 1934 (Fernald 1935). Tyndall (1983) suggested the species is spread by birds. The introduction of the Ohio population was likely from contamination of a wetland seed mix.

CYPERUS INVOLUCRATUS Rottb. (Cyperaceae) – Umbrella plant

Butler Co.: Oxford, Miami University campus, weedy in sidewalk cracks outside greenhouse, 16 Oct 2002, *M.A. Vincent 10888* (MU).

This is an unusual record for this far north. These plants were escapes from a greenhouse and grew in cracks of the sidewalks, persisting here for several years, only disappearing when new concrete was laid down. While umbrella plant has been reported as far north as New York, this east African native has formed naturalized populations only in the most southern of USA states (Tucker et al. 2002).

DYSPHANIA PUMILIO (R. Brown) Mosyakin & Clemants (Chenopodiaceae) – clammy goosefoot

Butler Co.: Oxford, weedy in gravel at store parking lot, 15 Jun 2011, *M.A. Vincent 15577* (MU, NY); *ibid*, weedy in flower beds and among shrub plantings along Walnut St. near College Ave., 19 Oct 2011, *M.A. Vincent 15667* (MO, MU, OS, OSH).

Clammy goosefoot, which is native to Australia, is found in widely scattered areas in North America with increasing frequency (Clemants & Mosyakin 2003; Gleason & Cronquist 1991; Poindexter et al. 2011). These are the second and third collections from Ohio. Wilder and McCombs (2002) reported it from Cuyahoga County (as *Chenopodium pumilio* R. Br.).

EGERIA DENSA Planch. (Hydrocharitaceae) – Brazilian water-weed

Clermont Co.: Miami Twp., Milford, Cincinnati Nature Center, in ponds, 30 Jul 1990, *M.A. Vincent et al. 3966* (GB, MU, NLU).

Brazilian water-weed is widely distributed in the USA, even though all know populations in this country are staminate and evidently distributed by birds, watercraft, and through the aquarium

trade (Haynes 2000). The origins of this population are unknown, though it has persisted here for many years.

ELEUTHEROCOCCUS PENTAPHYLLUS Nakai (Araliaceae) – Fiveleaf Aralia

Butler Co.: Oxford, Miami University, Western campus woods, 23 May 1985, *M.A. Vincent & D.D. Taylor 560* (MU); *ibid, D.D. Taylor 8702* (MU); Oxford, Miami University, seedlings & saplings, Bishop Hall, 8 Sep 2000, *M.A. Vincent & J. Woo 9179* (MU); Oxford, Miami University, woods E of Marcum Conference Center, 14 Sep 2010, *M.A. Vincent & Z. Li 15224* (MU). **Hamilton Co.**: Cincinnati, Ault Park, Observatory Ave., west of main park area on west side of road immediately south of weeping cherry plantings, 15 May 2010, *J. Godby & S. Castellano s.n.* (MO, MU, NY).

Eleutherococcus pentaphyllus (formerly known as *Acanthopanax sieboldianus* Makino), which is native to Japan (Rehder 1947), is an occasionally cultivated spiny shrub that sometimes escapes. It is now found in several states in the USA, including Indiana, Kentucky, West Virginia, and Pennsylvania (USDA NRCS 2011).

ELSHOLTZIA CILIATA (Thunb.) Hyl. (Lamiaceae) – crested latesummer mint

Hocking Co.: Good Hope Twp., NW ¼ SW ¼ SW ¼ sect. 26, locally common weedy species growing on E & W edge of gravel roadside next to yellow Hidden Driveway sign on E side of road, subjected to full-near full sunlight & rather far removed from any yards or cultivated areas in remote area along Donaldson Rd. (TR 121), .95 mi. S of SR 374, Rockbridge, 8 Oct 2010, *B.P. Riley 1554-1555* (OS); *ibid, B.P. Riley 1556* (BHO); *ibid, B.P. Riley 1557* (MICH); *ibid,* 16 Oct 2010, *B.P. Riley 1384* (DAWES); *ibid, B.P. Riley 1558* (MU).

The Asian *Elsholtzia ciliata* is known from eastern Canada and northeastern USA, as far west as Manitoba and North Dakota, and south to North Carolina (Gleason & Cronquist 1991; USDA NCRS 2011), often in moist areas.

EMILIA SONCHIFOLIA (L.) DC. (Asteraceae) – Lilac tasselflower

Butler Co.: Oxford, Miami University campus, weedy in "palm garden", Upham Hall courtyard, 19 Sep 2003, *M.A. Vincent 11422* (MU).

Emilia sonchifolia is a pantropical weed, originally native in Asia. In the USA, it is known only from the extreme southeastern states (Barkley 2006). This waif was found in an area where plants were brought in from the Carolinas for cultivation, and appeared as a weed in 2002, and again in 2003 and 2004. It has not been seen here since.

GAMOCHAETA PENSYLVANICA (Willd.) Cabrera (Asteraceae) – Pennsylvania cudweed

Butler Co.: Oxford, weedy in garden, 8 Sep 2009, *M.A. Vincent 14564* (MU).

According to Nesom (2006), Pennsylvania cudweed is native in the southeastern states in the USA, along the Gulf Coast and Atlantic seaboard. It is found as far north as Pennsylvania. This plant was found as a waif in a garden and was perhaps introduced with bedding plants.

GINKGO BILOBA L. (Ginkgoaceae) – Ginkgo, Maidenhair tree

Butler Co.: Oxford, Miami University campus, weedy under shrubs, NE of Ogden Hall, 15 May 2000, *E.J. Tepe 1652* (MU); *ibid,* 8 Sep 2011, *M.A. Vincent 15663* (MU, NA, NY, OS). **Hamilton Co.**: Cincinnati, amongst thick English ivy and under *Lonicera maackii*, Temple Ave., 2 Nov 2002, *F.T. Farruggia 213* (MU, NA, OS).

Ginkgo, an ancient genus once found across North America and Asia, is now only natively found in parts of China (Whetstone 1993). While widely cultivated, it has apparently escaped rarely, and is reported for 6 states in the eastern USA. These Ohio records are all of seedlings and saplings near ovulate trees.

ILEX CRENATA Thunb. (Aquifoliaceae) – Japanese holly

Cuyahoga Co.: Vermillion, on edge of river, Sep 2006, *A. Aerni 56* (MU). **Summit Co.**: along trail in upland woods, Munroe Falls Metropark, 28 May 1998, *A.W. Cusick 34399 & R.L. Gardner* (MU).

This species was listed by Wilder and McCombs (2002) for Cuyahoga County. These collections appear to be the only other Ohio records for this commonly cultivated holly.

IMPATIENS WALLERIANA Hook.f. (Balsaminaceae) – Impatiens, Busy Lizzy

Butler Co.: Oxford, Miami University campus, weedy along N wall of Gaskill Hall, and among bricks in patio, 21 Dec 2001, *M.A. Vincent 10449* (MICH, MO, MU, OS, OSH); *ibid*, 30 Jun 2005, *M.A. Vincent 12556* (MU); Miami University campus, NW corner of Shriver Center, weedy in sidewalk cracks, 19 Oct 2005, *M.A. Vincent 12632* (MU).

This species of *Impatiens* is very commonly cultivated as an annual bedding plant; it is native to eastern Africa, and, like other species of the genus, has explosively dehiscent capsules. It has previously been encountered as an escape in the USA only in Florida (USDA NRCS 2011), though Weakley (2011) also reports escaped in North Carolina and northern Georgia.

JUNIPERUS SABINA L. (Cupressaceae) – savin juniper

Franklin Co.: Hamilton Twp., large escaped, prostrate individual (up to two-feet tall & covering over 100 sq. ft. area) growing on dry, disturbed, N-facing embankment on S side of I-270, 100 ft. E of Groveport Rd. overpass & ¼ mi. W of Exit 49, Obetz, 11 Dec 2010, *B.P. Riley 1772-1774* (OS); *ibid, B.P. Riley 1775* (MU).

Juniperus sabina is not listed as part of the flora of North America by Adams (1993), though it is included on the USDA Plants website for Ontario (USDA NCRS 2011). It is an occasionally cultivated species, but Dirr (1998) describes it as not having a great deal to offer as an ornamental.

KALOPANAX SEPTEMLOBUS (Thunb.) Koidz. (Araliaceae) – castor aralia

INDIANA: Tippecanoe Co.: Stewart Woods, W of Purdue University campus, 10 Sep 2011, *N. Harby s.n.* (MU). **OHIO: Licking Co.**: Licking Twp., SW ¼ NE ¼ sect. 4, few locally scattered mature escaped shrubs growing in understory near extreme SE corner of mature mesic beech-maple woods recently acquired by the Dawes Arboretum, N side of Hupp Rd. (TR 309), 0.325 mi. E of SR 13, Newark, 9 Aug 2010, *D.M. Brandenburg 3395 & B.P. Riley* (DAWES).

Castor aralia is an occasionally cultivated spiny shrub native to eastern Asia (Dirr 1998). It has been reported as an escape for two states (USDA NRCS 2011), though unofficial reports are known for several others in the Midwest. It was just recently also discovered in Indiana as an escape, and is reported here as new to that state as well.

KOELREUTERIA PANICULATA Laxm. (Sapindaceae) – golden rain tree

Butler Co.: Oxford, Miami University campus, weedy near duck pond, 5 Sep 2008, *M.A. Vincent 14126* (MO, MU). **Preble Co.**: Camden, cleared hillside behind houses, 9 Oct 2005, *N. Howell 39* (MU). **Ross Co.**: along stream flood plain and weedy bank along river, Blair Rd. off Rt. 50, 10 Jun 2010, *M.A. & M.W. Vincent 14715* (MO, MU, NY, SRP); *ibid,* N central Paxton Twp., Morgantown Quad. Numerous mature local escapes located along E & W fencerow (particularly abundant on E side of main entrance) of Seip Mound State Memorial, S side of US Rt. 50, 1.35 mi. W-SW of California Hollow Rd. (T-150), 7 Sep 2008, *B.P. Riley 935* (OS).

Golden rain tree was first reported for Ohio by Cooperrider (1995) as an escape in Portage County and subsequently by Wilder and McCombs (2002) from Cuyahoga County. With three additional reports provided here, it is evident that this species is becoming more common as an escape and is naturalizing at least the Ross County site. It is relatively frequently found in many areas of the eastern half of the USA.

KYLLINGA GRACILLIMA Miq. (Cyperaceae) – Asiatic greenhead sedge, pasture spikesedge

Brown Co.: extreme S Union Twp., locally common species growing near soccer field in low/wet swale behind Ripley High School, 1317 S. 2nd St. (US Rt. 52), Ripley, 22 Aug 2009, *B.P. Riley 1369* (OS); *ibid,* 27 Sep 2009, *B.P. Riley 1370* (OS); *ibid, B.P. Riley 1371* (MU); *ibid, B.P. Riley 1372* (MICH). **Jackson Co.**: Liberty Twp., local, roadside spring fed ditch, 28 Aug 2011, *R.L. Gardner 7149 & D. Minney* (MICH, MU, OS).

Kyllinga gracillima is an introduced species from Asia which is found throughout most of the states in the eastern USA. It is found most frequently in wet areas such as along streams (Tucker 2002).

LAGERSTROEMIA INDICA L. (Lythraceae) – Crape myrtle

Butler Co.: Oxford, Miami University campus, weedy in flower beds, Hughes Hall, 13 Sep 2007, *M.A. Vincent 13768* (MU); *ibid,* 22 Sep 2010, *M.A. Vincent 15233* (MU, NY).

Crape myrtle is very widely cultivated as an ornamental shrub for its brightly colored flowers and attractive bark (Dirr 1998). It is known as an escape in much of the southeastern quarter of the USA (USDA NRCS 2011). With the introduction of more cold-hardy cultivars, it may be found more frequently in the northern half of the USA.

MALUS BACCATA (L.) Borkh. (Rosaceae) – Siberian crabapple

Belmont Co.: Weedy slope above mall parking lot below Interstate 70, E of Clairsville, 8 Aug 2010, *M.A. & M.W. Vincent 15193* (BKL, GH, MU, NY). **Wyandot Co.**: Salem Twp., S ½ SE ¼ SE ¼ sect. 11, locally common escaped species in canopy openings at N end of oak woods located on N side of CR 44, ¼ mi. E of US Rt. 23, Upper Sandusky, 9 Aug 2009, *B.P. Riley 1243* (OS).

Crabapples are notoriously difficult to identify, especially since many modern cultivars are of hybrid origin (Dirr 1998). Escaped specimens, which are often back-crosses or result from cross-cultivar hybridization, may prove exceedingly trying. It is possible, for many specimens, to at least approximate an identification using manuals and monographs which are available. The species given here match relatively well the species name given and are thus included.

Siberian crabapple is a very commonly cultivated species, of which several cultivars exist. It is included by Cooperrider et al. (2001) as part of the Ohio flora. This collection is included here to emphasize how commonly crabapples are escaping. They are undoubtedly much more widespread than current collections indicate.

MALUS PRUNIFOLIA (Willd.) Borkh. (Rosaceae) – Plumleaf crabapple

Belmont Co.: weedy slope above mall parking lot below Interstate 70, E of Clairsville, 8 Aug 2010, *M.A. & M.W. Vincent 15194* (MO, MU, NY). **Medina Co.**: weeds around abandoned restaurant, along Rt. 18 just off Interstate 71, 28 Jul 2010, *M.A. & M.W. Vincent 15018* (MU, NY). **Morrow Co.**: edge of gravel parking area along Rt. 95, just off Interstate 71, 28 Jul 2010, *M.A. & M.W. Vincent 15005* (MO, MU, NY).

Several cultivars of this crabapple species are relatively common as ornamentals (Dirr 1998). It is known from several states as an escape (USDA NRCS 2011), including Pennsylvania (Rhoads & Block 2000).

MALUS × *ROBUSTA* (Carriere) Rehder (Rosaceae) – Siberian crabapple

Muskingum Co.: weedy woods by Red Lobster Restaurant, OH Rt. 660 at OH Rt. 60/146, Zanesville, 8 Aug 2010, *M.A. & M.W. Vincent 15197* (BKL, MU, NY).

No records exist of this hybrid [*M. baccata* × *M. prunifolia*] as an escape in the U.S., though this specimen fits the descriptions well. Again, it is commonly cultivated, with several cultivars (Dirr 1998), and both parent species are also in cultivation, so it may be found more regularly as an escape.

MEDICAGO MINIMA (L.) L. (Fabaceae) – Little bur-clover

Hamilton Co.: fencerow, county fairgrounds, E of Springfield Pike, Wyoming, 30 Apr 1998, *A.W. Cusick 34282* (MU).

A relatively widespread weedy species, *M. minima* is reported for the northeastern U.S. (Gleason & Cronquist 1991), though it is more common further south and west.

METASEQUOIA GLYPTOSTROBOIDES Hu & W.C. Cheng (Cupressaceae) – Dawn redwood

Butler Co.: Oxford, saplings along E side of Formal gardens greenhouse, 4 Oct 2005, *M.A. Vincent 12626* (MU).

Dawn redwood, like *Ginkgo*, is widespread in the fossil record in North America and Asia, and was considered extinct until the late 1940's, when it was rediscovered living in China (Ma & Shao 2003). No other reports of the species as an escape in North America can be found, and it is only mentioned as possibly persisting after cultivation by Watson and Eckenwalder (1993).

PENNISETUM ALOPECUROIDES (L.) Spreng. (Poaceae) – Chinese fountaingrass

Adams Co.: Jefferson Twp., 1 plant in infrequently mowed lawn, stream bottom in Moon Hollow, *R.L. Gardner 6641 & R. McCarty* (OS). **Butler Co.**: Oxford Twp., weed in garden, 6 Oct 2010, *D. Powell 26* (MU). **Hocking Co.**: Good Hope Twp., NW ¼ SW ¼ NW ¼ sect. 23, locally escaped species growing along edge of occasionally wet ditch on S side of road in front of 26067 Buena Vista Rd. (CR 34), 0.40 mi. W of US Rt. 33, Rockbridge, 10 Oct 2010, *B.P. Riley 1644* (OS); *ibid*, *B.P. Riley 1645* (BHO).

Chinese fountain grass is frequently cultivated for its attractive plumose inflorescences (Wipff 2003). The species has been reported as an escape in at least four other states (USDA NRCS 2011), including Pennsylvania (Rhoads & Block 2000).

PHYLLANTHUS TENELLUS Roxb. (Euphorbiaceae) – Mascarene Island leaf-flower

Butler Co.: Oxford, weed in vegetable garden, 1 Oct 1994, *M.A. Vincent* 6861 (MU); Oxford, Miami University campus, weedy in "palm garden," Upham Hall courtyard, 19 Sep 2003, *M.A. Vincent 11421* (MU); *ibid*, 15 Oct 2004, *M.A. Vincent* 12321 (MO, MU, OS); *ibid*, around Upham Hall greenhouse, 2 Sep 2010, *M.A. Vincent 15216* (MO, MU, NY).

Phyllanthus tenellus is likely under-reported and more common than now known. The genus tends to be overlooked, and species are difficult to identify. This species is a common weed in greenhouses and found among bedding plants available through "big-box" stores and other outlets. The populations on the Miami University campus are robust and spreading. It is widely distributed as a weed throughout the southeastern USA (USDA NRCS 2011).

PINUS TAEDA L. (Pinaceae) – loblolly pine

Meigs Co.: Olive Twp., numerous scattered, escaped saplings along N side of Number Nine Rd. (T-265) at Lake Rd. (T-277) int., Shade River State Forest, 4 Aug 2006, *B.P. Riley 467* (OS). **Vinton Co.**: Madison Twp., SE ¼ sect. 34, numerous escaped saplings along N edge of F. Rd. 1 within Will Tract (planted 1940), .25 mi. W of SR 278, Zaleski State Forest, 23 Jul 2006, *B.P. Riley 468* (OS).

Loblolly pine is native to the southeastern USA (Kral 1993), and is sometimes used in pine plantations for pulpwood and lumber. It has spread beyond its native range as escapes from cultivation as far north as Illinois and Kentucky (USDA NRCS 2011).

PRUNELLA LACINIATA (L.) L. (Lamiaceae) – Cutleaf selfheal

Clinton Co.: Cowan Lake State Park, grassy berm near commissary, 26 Jun 2004, *M.A. Vincent 12126* (MICH, MO, MU, OS).

Wilder and McCombs (2002) report *P. laciniata* as new to Cuyahoga County, Ohio. This is the second record from the state, and was likely introduced with grass seed. It is known from scattered populations in the eastern USA (Gleason & Cronquist 1991; USDA NRCS 2011).

PRUNUS ARMENIACA L. (Rosaceae) – apricot

Hardin Co.: Jackson Twp., E ½ NE ¼ sect. 25, small clonal thicket of individuals up to 6' tall located across from 4220 SR 53 on W side of road & on E side of abandoned RR, ¼ mi. S of TR

50, 26 Jun 2007, *B.P. Riley 706* (OS). **Wood Co.**: Henry Twp., NE ¼ NE ¼ sect. 24, one mature escaped individual ca. 13 ft. tall located along brushy fencerow on W side of Insley Rd., ca. 200' S of Oil Center Rd., 30 Aug 2006, *B.P. Riley 474* (OS).

Although apricots are relatively widely cultivated as fruit trees, records of escapes are uncommon (Gleason & Cronquist 1991).

PRUNUS PADUS L. (Rosaceae) – European bird cherry

Butler Co.: Oxford, weedy in hedgerow, Erin Dr. near Glos Dr., 3 Jun 2010, *M.A. & M.W. Vincent 14685* (MO, MU, NY). **Darke Co.**: Shawnee Prairie Preserve OH Rt. 502, just W of Greenville, 6 Jun 2003, *M.A. Vincent et al. 11069* (MU).

Prunus padus is native to Eurasia, and has long been cultivated for its attractive flowers, foliage, and bark (Dirr 1998). Even so, reports of the species as escapes are rare. Rhoads & Block (2000) report the species for Pennsylvania.

QUERCUS PHELLOS L. (Fagaceae) – willow oak

Clermont Co.: extreme ESE Miami Twp., two escaped saplings (up to 2.5 feet tall) growing in understory of young, soft maple woods on small hummocks within wet, acidic site near E edge of power line clearing (acidic meadow) on W side of Miami Meadows Park, 1546 SR 131, Milford, 18 Aug 2010, *B.P. Riley 1675, D. Boone & R. Cranfill* (OS).

The native range for willow oak is the southeastern states, north into southwestern Kentucky and southeastern Missouri (Jensen 1997; Stein et al. 2003). It is occasionally cultivated in Ohio, at least in the southern half of the state, and has been rarely seen to escape. This collection appears to be the first documentation of the species outside cultivation in Ohio.

QUERCUS ×DEAMII Trelease (*Quercus macrocarpa* × *Q. muehlenbergii*) (Fagaceae) – Deam's oak

Hamilton Co.: Cincinnati, one mature, native hybrid (49.50" DBH x 82' tall) located on W edge of section 9 on SW side of Spring Grove Cemetery & Arboretum, 4521 Spring Grove Ave., 31 May 2004, *B.P. Riley 575.01-575.06* (OS). **Hancock Co.**: Liberty Twp., NW ¼ NW ¼ NW ¼ sect. 26, one young, native individual with 4.90" DBH × ca. 25' tall (as of 8/25/2006) located along E edge of hiking trail in young woods, just W of Discovery Center within Oakwoods Nature Preserve on W side of CR 144, .80 mile S of CR 88, Findlay, 25 Aug 2006, *B.P. Riley 575.07-575.10* (OS); *ibid,* 28 Aug 2006, *B.P. Riley 575.11* (OS).

QUERCUS ×EGGLESTONII Trelease (*Quercus imbricaria* × *Q. shumardii*) (Fagaceae) – Eggleston's oak

Adams Co.: eastern Brush Creek Twp., one medium-size tree (12.01" DBH × ca. 50' tall as of date collected) located in mesic woods near drainage on S side of Easter Run & on N side of trail to Buzzardroost Rock on S side of State Route 125 within Edge of Appalachia Preserve, 2 Jul 2005, *B.P. Riley 576.01* (OS).

QUERCUS ×GUADALUPENSIS Sargent (*Quercus macrocarpa × Q. stellata)* (Fagaceae) – (bur oak × post oak)

Madison Co.: NE Canaan Twp., one mature, native tree (26.50" DBH × 56' tall as of 3/21/2005) located on N side of parking lot at Big Darby Baptist Church, 6921 Plain City Georgesville Road, along E edge of road in grassy area W-SW of basketball court; ca. 400' N of Price Hilliard Rd. & Plain City-Georgesville Rd. intersection & 4.50 miles N of I-70, Plain City, 21 Sep 2005, *B.P. Riley 579.04* (OS).

QUERCUS ×PALMERIANA A. Camus (*Quercus imbricaria × Q. falcata*) (Fagaceae) – Palmer's oak

Scioto Co.: Bloom Twp., E central ½ sect. 29, one large individual (29.4" DBH × 73' tall as of 5/9/2003) located at fork in road/intersection of Bloom Furnace Rd. (CR 291) & Brushy Fork Rd. (T-292), 2.7 miles SE of State Route 140, South Webster, (tree was cut down as of 13 Oct 2006), 9 May 2003, *B.P. Riley 584.01* (OS); *ibid,* 21 Jul 2005, *B.P. Riley 584.02-584.03* (OS); *ibid,* 13 Oct 2006, *B.P. Riley 584.04-584.05, B. Weber & R. Larson* (OS).

QUERCUS ×RIPARIA Laughlin (*Quercus rubra × Q. shumardii*) (Fagaceae) - (northern red oak × Shumard oak)

Shelby Co.: Clinton Twp., NE ¼ sect. 1, one large, native tree (50.04" DBH × ca. 75' tall as of date collected) with metal inventory tag number 72, located at NE corner of section 4 within Graceland Cemetery, CR 25-A (South Main Street), S end of Sidney, 30 Jun 2005, *B.P. Riley 585.01-585.04* (OS).

QUERCUS ×VAGA Palmer & Steyermark (*Quercus palustris × Q. velutina*) (Fagaceae) – unfixed oak

Lucas Co.: Swanton Twp., S central ½ N central ½ sect. 20, one mature, native tree (20.75" DBH × ca. 65' tall as of date collected) growing in open oak savanna at Girdham Road Sand Dunes on E side of Girdham Rd., ca. ¼ mile S of Monclova Rd., just S of paved bike trail & E of 25 MPH/Bike sign, Oak Openings Metro Park, 25 Aug 2004, *B.P. Riley 590.01* (OS).

QUERCUS ×WILLDENOWIANA (Dippel) Zabel (*Quercus falcata × Q. velutina*) (Fagaceae) – Willdenow's oak

Jackson Co.: Jefferson Twp., S ½ NE ¼ sect. 35, one mature double-stemmed tree (largest stem measures 16.90" DBH × ca. 45' tall as of date collected) hanging over road, ca. 16 feet off E edge of CR 65/dry upland woods, on N-facing mid slope, near Bethel Church & Cemetery, Blackfork Station, 4 Aug 2007, *B.P. Riley 591.07* (OS). **Scioto Co.**: Harrison Twp., NE ¼ NE ¼ SE ¼ sect. 3, one mature tree (14.77" DBH × ca. 45' tall as of 2/2/2005) located on W-SW side of Kendall Rd. (T-230 – ca. 15' off road) just S of gravel driveway at 198 Kendall Rd., .60 mile N-NW of Taylor Hill Rd. (T-235), Minford, 2 February 2005, *B.P. Riley 591.02-591.03* (OS); *ibid,* 13 Oct 2006, *B.P. Riley 591.04, B. Weber & R. Larson* (OS); *ibid,* 10 Oct 2005, *B.P. Riley 591.05* (OS).

RUBUS OCCIDENTALIS L. var. ***PALLIDUS*** L.H. Bailey (Roseaceae) – black raspberry

Clinton Co.: Cowan Lake State Park, off Yankee Rd., 23 Jun 2005, *M.A. & M.W. Vincent 12541* (MU). **Hocking Co.**: Good Hope Twp., SW ¼ NE ¼ sect. 20, large population located in Conservation Area, .4 mile SW of Clear Creek Rd. (CR 116) on SW side of Starner Rd. (T-117), Clear Creek Metro Park, 28 Aug 2005, *B.P. Riley 302* (OS). **Pickaway Co.**: Walnut Twp., SE ¼

sect. 30, small native population located along Butterfly Trail at Stages Pond SNP, 4792 Hagerty Rd., 1.65 mi. E of US Rt. 23, 18 December 2005, *B.P. Riley 303* (OS).

This is a yellow-fruited variety of the common raspberry, as mentioned in Fernald (1950).

RUBUS PARVIFOLIUS L. (Roseaceae) – Japanese/trailing raspberry

Highland Co.: Extreme northern Paint Twp., small, escaped population growing on N edge of entrance to gravel parking lot on E side of SR 138, ca. 40 ft. off E edge of SR 138 & ca. 200 ft. N-NE of Cope Rd. (CR 85), Paint Creek Wildlife Area, 3 Jul 2010, *B.P. Riley 1691-1692* (OS); *ibid, B.P. Riley 1693-1694* (MU). **Knox Co.**: Liberty Twp., sect. 4-10, large extensive, escaped population growing within overhead power line clearing along W edge of Fairview Rd. (CR 50), .20 mi. N of US Rt. 36, Mt. Vernon, 28 Oct 2010, *B.P. Riley 1695-1696* (OS). **Muskingum Co.**: Washington Twp., NW ¼ SE ¼ sect. 3, locally abundant, escaped population growing throughout eastern white pine plantation on S end of former Zanesville State Nursery, 5880 Memory Rd., Zanesville, 26 Jun 2009, *B.P. Riley 1290-1291* (OS); *ibid, B.P. Riley 1292 & B L. Weber* (MU); *ibid,* 25 Jul 2009, *B.P. Riley 1296* (MICH). **Pickaway Co.**: Pickaway Twp., S central ½ S ½ sect. 12, large escaped population growing along wooded edge on N side of drainage in small open area on E side of US Rt. 23 & W side of T-513, .10 mi. N of SR 361, 15 Jun 2007, *B.P. Riley 768-769* (OS); *ibid,* 26 Jun 2009, *B.P. Riley 1293-1294* (MICH); *ibid, B.P. Riley 1295* (MU); *ibid,* 25 Jul 2009, *B.P. Riley 1297* (OS); Pickaway Twp., W ½ SE ¼ SW ¼ sect. 19, large escaped (not planted) invasive population along split rail fence along N-NW edge of Logan Elm State Memorial on SR 361 W, 1.0 mile E of US Rt. 23, 13 Jul 2008, *B.P. Riley 1022* (OS).

Rubus parvifolius, native to Australia, China and Japan, is a low arching shrub with pink or purple petals and a red, edible fruit (Rehder 1940). Though not listed among *Rubus* species on the USDA Plants web site (USDA NRCS 2011), it is a rapidly spreading invasive species now known from at least five states (Drobney & Widrlechner 2010).

SACCHARUM RAVENNAE (L.) L. – Plume grass

Greene Co.: Bath Twp., extreme NE. ¼ sect. 28, Wright-Patterson Air Force Base, Sand Hill, just S. of Clark/Greene County line, occasional in dry, limestone field, 7 Sep 2010, *R.L. Gardner 6987, M. Becus & J. Helton* (OS). **Hocking Co.**: Hill Twp., S. of exit, on road cut, E. of north bound U.S. Rt. 33, rare, a few plants, 18 Sep 2008, *R.L. Gardner 6061* (OS). **Ross Co.**: City of Chillicothe, roadside of southbound U.S. Rt. 23 at U.S. 50 exit, 28 Sep 2010, *R.L. Gardner 6998* (OS).

This popular ornamental grass was first reported for Ohio by Wilder and McCombs (2002) for Cuyahoga County. It occurs on roadside lawns and steep, grassy roadbanks around the city of Columbus in Franklin County. It appears to be increasing numbers in the city in the last 5 years. Plume grass also occurs along highways in Delaware, Hamilton, Scioto, and Wayne counties.

SALIX MATSUDANA Koidzumi (Salicaceae) – corkscrew willow

Adams Co.: extreme S central Green Twp., two escaped individuals up to four ft. tall growing in sandbar along E edge of West Fork Ck. on S side of access lane leading up to Point Cemetery, ca. 160 ft. W of Blue Creek Rd. (C-18), .30 mi. N of US Rt. 52, Rome, 6 Sep 2008, *B.P. Riley 1046* (OS).

Salix matsudana is native to northeastern Asia, and many cultivars exist (Dirr 1998). The species was reported for Ohio by Cooperrider et al. (2001), but is rarely found as an escape. It is only known from six states in the USA (USDA NRCS 2011).

SCHOENOPLECTUS MUCRONATUS (L.) Palla (Cyperaceae) – rough-seed bulrush

Butler Co.: Ross Twp., ODOT wetland mitigation site S of Hamilton-New London Rd., E of US Rt. 27, 15 Jun 2006, *M.A. Vincent 12858, V. Baird & K. Levings* (MU); *ibid*, 12 Aug 2008, *B. Wilfong 2* (MU). **Fairfield Co.**: Violet Twp., sect. 22, scattered, 51-100 plants in created wetland, 16 Aug 2008, *R.L. Gardner 5997, K. Asnani, D. Hague & T. Hague* (MU, OS). **Hamilton Co.**: Miami Whitewater Forest, colony of 100 or more plants growing in the wetland near rose mallow, 16 Jul 2005, *Becus 71605C & D. Conover* (MU, OS). **Pickaway Co.**: Madison Twp., mitigation wetland, Slate Run Metro Park, 15 Sep 2005, *R. Sanders s.n.* (MU).

Schoenoplectus mucronatus, a Eurasian native (Smith 2002b), is spreading quickly in North America. Its quick spread has been aided by it being part of wetland seed mixes for mitigation wetlands. Wetland plant suppliers have mistaken this species for the native *S. pungens*. According to the landowners of the Butler County and Fairfield County sites, no seed mixes were used to develop the wetland.

SENNA OBTUSIFOLIA (L.) Irwin & Barneby (Fabaceae) – Java-bean

Butler Co.: Oxford Twp., sect. 34, Booth Rd., weed in flower bed, 26 Sep 2009, *M.A. & M.W. Vincent 14565* (MICH, MU, NY).

Java-bean is a native species of the New World tropics that is now widely distributed in the eastern half of the USA, up until now found in most eastern states except Ohio (Isely1998; USDA NRCS 2011).

SMILAX BONA-NOX L. (Smilacaceae) – saw greenbrier

Butler Co.: Oxford, Miami University campus, weedy in "palm garden", Upham Hall courtyard, 19 Sep 2003, *M.A. Vincent 13232* (MU).

First seen at this site in 2002, saw greenbrier persisted here through 2008. The plants were apparently introduced with perennials purchased in the Carolinas for planting here, and died back to the ground each winter, coming up anew each spring. While Cooperrider et al. (2001) list *S. bona-nox* among their deleted species, Holmes (2002) includes Ohio in the range for the species.

SORGHUM* × *ALMUM Parodi (Poaceae) – Columbus grass

Butler Co.: Milford Twp., edge of farm field along St. Rt. 73, 22 Sep 2010, *M.A. & M.W. Vincent 15235* (MU, NY).

This hybrid derivative of *S. halepense* (L.) Pers. (Johnson grass) and *S. bicolor* (L.) Moench (sorghum) is occasionally encountered where the two species have occurred in proximity. It has wider spikelets and more veiny glumes than *S. halepense* (Barkworth 2003b). This hybrid has also been observed in Darke County as a field weed.

SPIRAEA JAPONICA L.f. (Rosaceae) – Japanese Spiraea

Adams Co.: Meigs Twp., SW. of jct. of Davis Memorial & Beaver Pond Rds., rare at edge of prairie opening, 27 Jul 2007, *R.L. Gardner 3463* (OS); Green Twp., head of Southdown Fork, occasional, escaped from original planting at abandoned home site, 22 Jun 2010, *R.L. Gardner 6853 & R. McCarty* (OS). **Athens Co.**: Dover Twp., sect. 33, Utah Ridge, 1 July 2008 *R.L. Gardner 5919* (OS). **Licking Co.**: Fallsbury Twp., NE ¼ NE ¼ sect. 8, locally common escaped shrub growing throughout understory of mature red and eastern white pine plantation located at 12122 Pine Bluff Rd. 12 Jul 2010, *B.R. Riley 1708* (OS). **Ross Co.**: Colerain Twp., S. of Pleasant Hill Church, W. of St. Rt. 327, rare in mature woods, 20 Jun 2007, *R.L. Gardner 5671* (OS). **Scioto Co.**: Union Twp., Colley Rd. N. of McDermott, frequent in pasture, 27 Jun 2006, *R.L. Gardner 5263* (OS); Clay Twp., SE ¼ NW ¼ SW ¼ sect. 14, locally escaped population consisting of several shrubs growing in small canopy opening within dry-xeric, ridgetop oak-pine woods behind/on N-NW side of Long Run Universal Cemetery, 28 Aug 2010 *B.R. Riley 1709* (OS), *1710* (MU). **Washington Co.**: Independence Twp., sect. 13, locally common to scattered; spreading along Davis Run, 8 Jul 2008 *R.L. Gardner 5931* (OS); Lawrence Twp., St. Rt. 26 near Moss Run, rare, edge of stream, 7 Jul 2008, *R.L. Gardner 5953* (OS). **Wayne Co.**: Plain Twp., Wooster Memorial Park, occasional, spreading from introduction along old access lane, 7 Jul 2010, *R.L. Gardner 6875* (OS).

Though previously reported for Ohio (Cooperrider et al. 2001; Furlow 1991 [Tuscarawas Co.]), these records of Japanese spiraea show that it appears to be spreading quickly in southern Ohio, with rare local escapes in the northern part of the state. This species is a serious pest in southeastern USA, invading a variety of habitats (Anonymous 2005).

SYMPLOCOS PANICULATA (Thunb.) Miq. (Symplocaceae) – sapphire-berry

Licking Co.: Licking Twp., SW ¼ NE ¼ sect. 4, few locally scattered mature escaped shrubs growing in understory near extreme SE corner of mature mesic beech-maple woods recently acquired by the Dawes Arboretum, N side of Hupp Rd. (TR 309), .325 mi. E of SR 13, Newark, 9 Aug 2010, *B.P. Riley 1715-1716 & D.M. Brandenburg* (OS); *ibid*, *D.M. Brandenburg 3396-3397 & B.P. Riley* (DAWES).

Sapphire-berry is an occasionally cultivated Asian shrub or small tree with attractive foliage and white flowers, grown especially for its visually appealing blue fruits (Dirr 1998; Rehder 1940). It was previously reported as an escape in the USA only from Pennsylvania (Rhoads & Block 2000), though a specimen of the species as an escape in D.C. (*A.T. Whittemore 00-015*) is housed at MU.

TSUGA CAROLINIANA Engelm. (Pinaceae) – Carolina hemlock

Summit Co.: Boston Twp., several naturalized saplings growing on & along W-facing sandstone rock ledges S-SE of Octagon Parking Area w/in Kendall Park on N side of Truxell Rd., 1.95 mi. E of Akron-Peninsula Rd., Cuyahoga Valley Nature Preserve, 27 Aug 2006, *B.P. Riley 22* (OS).

ULMUS PARVIFOLIA Jacq. (Ulmaceae) – Chinese elm/lacebark elm

Butler Co.: Oxford, Miami University campus, hundreds of seedlings/saplings weedy around Pearson Hall, 9 Sep 2011, *M.A. Vincent 15665* (MU, NA, NY). **Franklin Co.**: Madison Twp., E ½ E ½ NW ¼ sect. 4, extremely abundant local escapes (numerous saplings of various sizes) growing in unmanaged area near mature, planted trees located at SE corner of Helsel Park, W side of

S. Hamilton Rd., ¼ mi. S of Refugee Rd., Columbus, 19 Oct 2010, *B.P. Riley 1732-1733* (OS). **Warren Co.**: Franklin, woods at end of Lance Dr., 19 Nov 2006, *S. Kennedy 34* (MU).

Chinese elm is likely more common as an escape than is indicated by Sherman-Broyles (1997), given the large numbers of seedlings and saplings often found near cultivated trees.

ULMUS PUMILA L. × ***U. RUBRA*** L.(Ulmaceae) – Siberian elm/slippery elm hybrid

Pickaway Co.: Harrison Twp., extreme N edge NE ¼ NE ¼ sect. 11, few escaped sapling individuals (up to 12' tall) growing along fencerow on N edge of soccer fields at Teays Valley Park on N side of SR 752, 1.15 mi. E of US Rt. 23, Ashville, 19 Sep 2009, *B.P. Riley 1367* (OS). **Union Co.**: Jerome Twp., one mature tree growing along W-SW edge of small woods along E-NE edge of RR tracks, .20 mi. S-SE of Converse Rd. (CR 23) at Currier Rd. (TR 8) int., Plain City, 1 Oct 2010, *B.P. Riley 1740-1741* (OS). **Wood Co.**: Henry Twp., S central ½ S ½ SE ¼ sect. 1, small, localized, escaped population (3-4 individuals up to 25' tall) growing with several *Ulmus pumila* saplings on dry, disturbed site on E side of propane facility, located on Cygnet Rd. at NW corner of SR 25 near I-75 exit 171, Cygnet, 10 Sep 2008, *B.P. Riley 1077* (OS).

This hybrid elm is a widespread derivative of the introduced Siberian elm and the native slippery elm (Sherman-Broyles et al. 1997). On the USDA Plants web site (USDA NRCS 2011), it is called "*Ulmus* × *notha* Wilhelm & G. Ware, ined.", and its presence in three states is indicated.

VIBURNUM CARLESII Hemsl. (Caprifoliaceae) – Koreanspice viburnum

Butler Co.: Oxford, Miami University campus, Bishop Woods, common understory plants, 22 Apr 2003, *M.A. Vincent 10978* (MICH, MO, MU, NA, OS, OSH). **Hamilton Co.**: Green Twp., Cincinnati, Hutchinson Rd., in field close to forest, 12 Sep 2001, *J.M. Zeek 27* (MU).

Not previously reported as an escape in North America, Koreanspice viburnum is widely planted for its clusters of attractive and fragrant flowers (Dirr 1998; Rehder 1940). This species is likely more widespread, given the frequency with which it is planted.

VIBURNUM PRUNIFOLIUM L. × ***V. RUFIDULUM*** Raf. (Caprifoliaceae) – (blackhaw viburnum × rusty viburnum)

Adams Co.: SE ¼ Tiffin Twp., one hybrid individual growing amongst typical blackhaw viburnum along edge of Soldier's Run on S side of SR 125 on conservation easement property next to The Edge of Appalachia Preserve & managed by TNC, 25 Jun 2005, *B.P. Riley 172 & R. Gardner* (OS); SE Franklin Twp., one mature hybrid individual located on S side of Portsmouth Rd. (CR 198) along wooded edge under power lines, 1.25 mi. E-SE of US Rt. 32, 1 Jul 2006, *B.P. Riley 541* (OS).

VIBURNUM SETIGERUM Hance (Caprifoliaceae) – Tea viburnum

Hamilton Co.: spontaneous at woodland margin, Spring Grove Cemetery, Cincinnati, 18 Oct 2003, *M.K. Whitson & J.W. Thieret 61732* (MU, KNK).

A Chinese species, *V. setigerum* is characterized by its long, acuminate leaves with widely spaced teethe, and its red to orange fruits (Dirr 1998; Rehder 1940). It has previously been reported as an escape in Pennsylvania, New York and Connecticut (USDA NRCS 2011).

VIBURNUM SIEBOLDII Miq. (Caprifoliaceae) – Siebold's arrowwood

Butler Co.: Oxford, Miami University campus, woods next to Flower Hall, 16 Jul 1997, *K.M. Shockey 139* (MU). **Licking Co.**: Licking Twp., N ½ NE ¼ SE ¼ sect. 4, one mature, escaped shrub growing in canopy opening within mature mesic beech-maple woods off N edge of Gorge Trial within East Woods Arboretum, W of Quarry Run & .84 mi. E of SR 13, The Dawes Arboretum, 22 Jul 2010, *B.P. Riley 1752-1753* (OS); *ibid, B.P. Riley 1754 & D.M. Brandenburg* (MU). **Summit Co.**: edge of beech-maple woods, Goodyear Heights Metropark, N of Newton St., Akron, 28 May 1998, *A.W. Cusick 34404 & R. Gardner* (MU).

Siebold's arrowwood is known from several states in the mid-Atlantic region of the USA, including Pennsylvania (Rhoads & Block 2000; USDA NRCS 2011).

YOUNGIA JAPONICA (L.) DC. (Asteraceae) – Oriental false hawksbeard

Butler Co.: Oxford, Miami University campus, weedy in "palm garden", Upham Hall courtyard, 19 Sep 2003, *M.A. Vincent 11420* (MU).

This Asian species is found throughout much of the southeastern USA, as far north as Pennsylvania and New York (Spurr 2006). This population was first seen in 2002 and persisted until 2006.

ZOYSIA JAPONICA Steud. (Poaceae) - Korean lawngrass

Franklin Co.: Madison Twp., SW ¼ NE ¼ sect. 5, locally widespread naturalized and escaped species forming large clonal colony near brush line in far backyard, 3003 Courtright Rd., Columbus, 22 May 2011, *B.P. Riley 1777* (OS).

Anderson (2003) described Korean lawngrass as the first species *Zoysia* introduced in North America. According to the USDA Plants database (USDA NRCS 2011), the species is known from 11 states, including Indiana and Kentucky.

ACKNOWLEDGEMENTS

The authors thank the curators of the various herbaria cited for allowing us access to specimens examined for this study.

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